

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

Claims 1-8. (Cancelled)

9. (Withdrawn) A method of producing an enzyme having modified phytase activity comprising:

- a) providing a host cell transformed with the expression construct of Claim 4;
- and
- b) culturing said host cell under conditions suitable for said cell to produce said phytase.

10. (Withdrawn) The method of Claim 9, further comprising:

- c) recovering said phytase.

11. (Withdrawn) The method of Claim 9, wherein said host cell is a *Bacillus* species.

12. (Withdrawn) The method of Claim 11, wherein said host cell is a *Bacillus subtilis*.

13. (Currently Amended) A method of producing recombinant phytase having modified activity, said method comprising:

- a) providing a nucleic acid comprising a sequence encoding a signal sequence operable in a *Bacillus* species and a sequence encoding a mature phytase, wherein said nucleic acid ~~which~~ is at least 95% identical to SEQ ID No. 2;
- b) subjecting said nucleic acid to error-prone amplification;

c) transforming a host cell with an expression construct comprising a product of said amplification; and

d) culturing said host cell under conditions suitable for said cell to express said amplification product.

14. (Original) The method of Claim 13, wherein said host cell is *Bacillus subtilis*.

15. (Original) The method of Claim 13, further comprising:

e) recovering said phytase.

16. (Withdrawn) The recombinant phytase produced according to the method of Claim 13, wherein, said recombinant phytase comprises the amino acid sequence of amino acids 31-440 of SEQ ID NO: 7 or SEQ ID NO: 8.

17. (Withdrawn-Currently Amended) The recombinant phytase produced according to the method of Claim 13, wherein said modification is a substitution and said substitution is at amino acid sequence position 113 of a mature AppA phytase or of a natural variant thereof.

18. (Withdrawn) The recombinant phytase of Claim 17, further comprising a modification at one or more of the amino acid sequence positions selected from the group consisting of residues corresponding to residue 26, 43, 46, 54, 73, 126, 184, 228, 384, and 410 of a mature AppA phytase or of a natural variant thereof.

19. (Withdrawn) The method according to Claim 13, wherein said nucleic acid comprises a sequence selected from SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30 or SEQ ID NO: 33.

20-22. (Cancelled)

21. (New) The method according to Claim 13, wherein said nucleic acid is at least 98% identical to SEQ ID No. 2.